

Curriculum Vitae

Davide Mazza, Ph. D.

Contacts

Address:

LRBGE, NCI-NIH, 41 Library Drive
Bethesda, MD 20892
Building 41, Room 513B

Phone:

(301) 402-3844

E-mail:

mazzad@mail.nih.gov

Personal data

Citizenship:

Italian

Date of birth:

May 29th, 1980

Place of birth:

Genova, Italy

Education

April 2008:

Ph.D. (Physics), University of Genoa, Italy.
Dissertation title: *Study of the 3D diffusion of biological macromolecules by means of fluorescence recovery after photo-bleaching (FRAP) using linear and non-linear excitation schemes.*

October 2004:

M. Sc. (Physics), University of Genoa, Italy.

Professional experience - current position

February 2006 – June 2006:

Predoctoral visiting fellow at the National Institute of Health (NIH) – National Cancer Institute (NCI).

February 2008 – April 2008:

Predoctoral visiting fellow at the National Institute of Health (NIH) – National Cancer Institute (NCI).

March 2008 – Current:

Post-doctoral visiting fellow at the National Institute of Health (NIH) – National Cancer Institute (NCI). Laboratory for Receptor Biology and Gene Expression (LRBGE).

Publications

Peer reviewed publications in international journals / Book chapters:

- [7] *A new FRAP/FRAPa method for 3D diffusion measurements based on multi-photon excitation microscopy.* **D. Mazza**, K. Braeckmans, F. Cella, I. Testa, D. Vercauteran, J. Demeester, S.S. De Smedt and A. Diaspro, submitted (2008).
- [6] *Non linear microscopy in Biophotonics.* **D. Mazza**, P. Bianchini, V. Caorsi, F. Cella, P.P. Mondal, E. Ronzitti, I. Testa, G. Vicidomini and A. Diaspro, ed. L. Pavesi, Springer-Verlag UK, London, in press (2008).
- [5] *Photoactivation of pa-GFP in 3D: optical tools for spatial confinement.* I. Testa, M. Garre', D. Parazzoli, S. Barozzi, I. Ponzanelli, **D. Mazza**, M. Fareta and A. Diaspro, Eur. Biophys. J. doi: 10.1007/s00249-008-0317-9 (2008).
- [4] *Role of three-dimensional bleach distribution in confocal and two-photon fluorescence recovery after photobleaching experiments.* **D. Mazza**, F. Cella, G. Vicidomini, S. Krol and A. Diaspro, Appl. Opt. 46, 7401 (2007).
- [3] *Two-Photon excitation microscopy in Science of Microscopy.* A. Diaspro, M. Schneider, P. Bianchini, V. Caorsi, **D. Mazza**, I. Testa, G. Vicidomini and C. Usai, ed. P.W. Hawkes and J.C.H. Spence, Springer, Berlin (2007).
- [2] *Blue-light (488 nm)-irradiation-induced photoactivation of the photoactivatable green fluorescent protein.* I. Testa, **D. Mazza**, S. Barozzi, M. Fareta and A. Diaspro, Appl. Phys. Lett. 91, 133902 (2007).
- [1] *Encapsulated living cells on microstructured surfaces.* S. Krol, M. Nolte, A. Diaspro, **D. Mazza**, R. Magrassi, A. Gliozi and A. Fery, Langmuir 21, 705 (2005).

Conference Proceedings/Abstracts published in international journals:

- [6] *Role of 3D bleach distribution in FRAP (fluorescence recovery after photobleaching) experiments in confocal and two-photon excitation schemes.* F. Cella, **D. Mazza**, S. Krol, A. Diaspro. Cytometry 73A: 98 (2008).
- [5] *PA-GFP 3D localized photo-activation and tracking in living cells.* A. Diaspro, I. Testa, M. Fareta, D. Parazzoli, S. Barozzi, F. Cella, **D. Mazza**, V. Caorsi, G. Vicidomini, P. Bianchini, E. Ronzitti. Biophys. J., 90(S): 549A (2007).
- [4] *FRAP on nanostructured model systems: Evaluation of time dependent artefacts.* **D. Mazza**, S. Krol S., F. Cella, A. Diaspro. Cytometry, 69A: 470 (2006).
- [3] *Polyelectrolytes and polyelectrolyte nanocapsules: Valuable tools for FRET and FRAP measurements using 3D microscopy.* A. Diaspro, S. Krol, R. Magrassi, P. Bianchini, V. Caorsi, M. Schneider, G. Vicidomini, **D. Mazza**, G. Chirico, F. Cannone, A. Gliozi. Biophys. J. 88(S): 338A (2005).

[2] Quantitative FRAP by means of diffusion through 3D polyelectrolyte shells using confocal and two-photon excitation approaches. A. Diaspro, **D. Mazza**, S. Krol, V. Caorsi, P. Bianchini and G. Vicidomini. Microscopy and Microanalysis, 11 (S2): 786 (2005).

[1] Polyelectrolytes, Polyelectrolyte microcapsules and nanospheres - Valuable tools for microscope refinement in subresolution range. A. Diaspro, M. Schneider, R. Magrassi, P. Bianchini, V. Caorsi, **D. Mazza**, F. Cannone, G. Chirico, G. Vicidomini, S. Krol Microscopy and Microanalysis, 10 (S2): 1288 (2004).

Research presentations

2008, Feb 2nd – 6th, Long Beach (CA) - USA.

Biophysical Society Annual Meeting. *Influence Of 3d Bleach Distribution In Frap Experiments In Conventional And 2P Excitation Schemes* (poster).

2007, July 14th-18th, London – UK.

European Biophysical Society Meeting. *Relevance of Fast Scanning in FRAP Experiments* (poster).

2007, March 28th, Milan – ITALY.

SEMM course on Fluorescence Imaging. Invited Lecture: *Fluorescence Recovery After Photobleaching (and other fluorescence perturbation techniques)*.

2007, January 29th-February 2nd, Venice – ITALY.

XI School of Pure and Applied Biophysics, Advanced Optical Microscopy Methods in Biophysics. Invited Lecture: *Fluorescence Recovery After Photobleaching*.

2005, March 19th-24th, Jena - GERMANY.

Focus on Microscopy FOM2005. *FRAP refinement: Analysis of time and space artefacts in heterogeneous nanostructured model systems* (platform).

2005, February 11th-19th, Long Beach (CA) - USA.

Biophysical Society Annual Meeting. *Polyelectrolytes and Polyelectrolyte nanocapsules: Valuable tools for FRET and FRAP measurements using 3D microscopy* (poster).